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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/650,333

08/28/2003

Akihiro Sawada

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08/03/2006

EPSON RESEARCH AND DEVELOPMENT INC  
INTELLECTUAL PROPERTY DEPT  
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EXAMINER

MISKA, VIT W

ART UNIT

PAPER NUMBER

2841

DATE MAILED: 08/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/650,333	<b>Applicant(s)</b> SAWADA ET AL.	
	<b>Examiner</b> Vit W. Miska	<b>Art Unit</b> 2841	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-18, 20, 21 and 24-29 is/are pending in the application.  
     4a) Of the above claim(s) 13-15, 17, 18, 20 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-12, 16 and 24-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 10-12, 16 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazawa et al (6885615) in view of Miyazawa (6266296).

The reference discloses an analog timepiece comprising a battery (col. 8, line 13), oscillator (col. 14, line 46), plate- like vibrator 10, a driven body 100 driven by vibration of vibrator 10, time indicating mechanism or calendar device 50 moved by the driven body via transform mechanism 556, the vibrator including piezoelectric actuator defined by a diaphragm formed by stacking piezoelectric elements 30,31 and a plate like reinforcing member 32, fixing portion 552 adapted to fix the diaphragm to supporting body 103, abutment portion 36 disposed at the longitudinal end of the diaphragm, the piezoelectric element vibrating in a longitudinal direction and at an angle with respect to the longitudinal direction (see col. 14, lines 42ff), abutment portion 36 moving to drive

driven body 100, the latter being pressed into engagement with abutment portion 36 by pressing member 550 (Fig. 53), vibrator 10 not overlapping the driven body 100 or transform mechanism 556(see Figs. 1 and 53), pressing member 550 pressing driven body 100 (Fig. 53).

2. Miyazawa et al '615 do not specifically describe an integrated circuit. However, Official notice is taken of the desirability of providing electronic components in the form of integrated circuit as a conventional fabrication technique. Therefore, it would be obvious for one skilled in the art to arrange the driving circuit shown in Fig. 18 as an integrated circuit to miniaturize the dimensions of the timepiece.

3. Miyazawa et al '615 do not disclose the driven body or transform mechanism for moving hands for indication time. However, Miyazawa (6266296) discloses a piezoelectric actuator 10,21 for driving a calendar indicator 50 of the type disclosed in Miyazawa et al '615. The reference further suggests at col. 33, lines 38ff:

"In addition, the actuator 10 to which the present invention is applied can be utilized not only as the calendar mechanism in the wristwatch, but also as a driving device for apparatuses displaying a time, a month, a year, the age of the moon, the position of the sun and further, the depth of water, barometric pressure, temperature, humidity, direction, velocity and so forth."

In view of the suggestion that the piezoelectric actuator 10, 21 may be used to drive a device for indicating time, one of ordinary skill in the art having both references would

therefore apply the teaching of Miyazawa '296 to the piezoelectric driven calendar actuator of Miyazawa et al '615 to drive a time indicating mechanism other than a calendar device in order to provide the benefits of this alternative to a stepping motor. A time indicating device with hands would be an obvious and conventional means for indicating time in the wristwatch (col. 10, line 66) of Miyazawa et al '615.

4. With respect to claim 28, Miyazawa et al '615 does not disclose a position detector for the second hand. A detection unit 501 is provided to detect the position of the movement at twelve o'clock to advance the calendar mechanism. However, when the device is modified in view of Miyazawa '296 as suggested above, it would be obvious that a position detector would similarly be provided for the second hand in order that the remaining hands be advanced at the appropriate times.

5. Claims 24 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazawa et al '615 and Miyazawa '296, as applied to claim 10, above, in further view of the new patent cited to Aoki.

6. The Miyazawa references do not suggest placing the components of the timepiece in a non-overlapping manner. However, the Aoki reference discloses a timepiece with battery 2, oscillator 5, IC 5, motor (col. 4, line 17) and other components arranged so as not overlap each other. One of ordinary skill in the art having the references would thus be taught to arrange the components claimed in the Miyazawa et

al reference in a non-overlapping manner, as suggested by Aoki, in order to reduce the thickness of the wristwatch.

7. Applicant's comments have been given careful consideration but have not been found persuasive in view of the new grounds of rejection of the amended claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vit W. Miska whose telephone number is 571-272-2108. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, K. Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Vit W. Miska  
Primary Examiner  
Art Unit 2841